Alstom DCS OI

Operator interface platform for substation automation

While substations are usually unmanned during normal conditions, efficient information access is a key requirement in emergency situations. Design, installation, life extension and maintenance instances of an electrical substation's digital control system (DCS) demand a straightforward, user-friendly interface. Intuitive access to the most relevant information and fully secure operations are necessary to ease operator tasks. To help you meet these challenges, we offer the Alstom DCS Operator Interface (OI): a native platform dedicated to substation automation.

Native integration of substation requirements

Alstom DCS OI relies on a standard graphical user interface, enabling local or web visualisation of single line displays. The OI's true added value consists of a series of fully tested modules that match electrical application needs such as: real-time communication protocol interface, select before operate sequences, automation capabilities and no data loss guarantee.

Intuitive and fully secure interface

Alstom's DCS OI scans of two dimensional substation representations or remote visualisations of real time video significantly improve the operator's understanding of the situation. Embedded buttons enable functions such as synchro-check or interlocking condition displays to greatly increase the safety of operation and maintenance actions. Multiple language management allows dynamic switching between task-oriented dialects (operation vs. maintenance), or between national languages.

Customer Benefits

- Native integration of substation requirements
- Intuitive, secure and efficient interface
- Scalable platform tailored to each project
- OI Hot Redundancy
- Consistent suite of operator tools
- Compatible with all versions of Alstom Grid's DCS

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Scalable platform tailored to your project

The configuration of Alstom's DCS OI is tailored according to the needs of each project. This includes the number and type of screens and engineering facilities. From a performance perspective, the OI can be expanded seamlessly from a single box to a series of interconnected PCs - with partial or complete redundancy.

The OI is open to the integration of any additional software and may display any type of HMI, including real-time images issued from video cameras, providing a remote and secure view of the application.

Open and efficient interfaces

The DCS OI provides an open interface to multiple intelligent electrical devices (IEDs) and Master SCADA through the latest ethernet protocols UCA2 and IEC61850.

Disturbance files (COMTRADE 97/2001) and setting data are retrieved on the same link without disturbing real-time performance, using pass-through technology.

Additional supported standards for data access include web access, SQL™ interface, COMTRADE archives or Crystal Report™.

Consistent suite of operator tools

OI tools cover the complete lifecycle of the electrical application including: system engineering, IED engineering, substation automation, network analysis, system maintenance and IED maintenance – all integrated with a consistent look and feel.

The OI can provide access to (as a complement to local HMIs) any remote connection to present real-time information and any archived data for maintenance and supervision. Remote access is available through PSTN, DSL, satellite link as a dedicated application or Web server.

OI Hot redundancy

The OI server redundancy is managed through a set of 2 OI servers (named cluster). The OI client can be connected to one of the 2 servers.

Reconfiguration is automatically managed when the preferred server is reconnected. Each datapoint change is consolidated between the 2 servers (real-time data & historical data are the same on both servers).
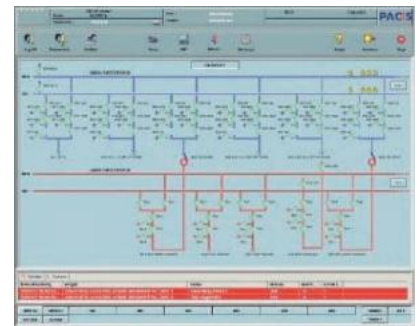
Key features

- Intuitive and secure monitoring and control via Windows® 2000 or XP modules
- Real time communication with following protocols: UCA2, IEC 61850, OPC, IEC 60870-5-103, IEC 60870-5-101, DNP3, ModBus...
- Powerful archiving and reporting facilities (SQL, COMTRADE, etc.)
- Universal real-time IEC 61131-3 automation capabilities
- Unique system management tool for efficient database version management
- Complete system engineering tools for XML database design
- Hardware compliant with EMC and environmental electrical constraints
- 10 s internal resolution and instance

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